

CLAIMS

1. A method for staggercasting, comprising the steps of:  
encoding a first signal representing content, which content has a time duration;  
encoding a second signal representing the content;  
specifying a time delay period for the time duration of the content;  
generating a composite signal comprising the first and second encoded signals, wherein the first encoded signal is delayed with respect to the second encoded signal by the time delay period for the time duration of the content; and  
if an error is detected in the composite signal, decoding the received second encoded signal to produce the content, otherwise decoding the delayed received first encoded signal to produce the content.
  
2. The method of claim 1, wherein:  
the generating step comprises the step of generating the composite signal further comprising a signal carrying data representing the time delay period,  
the method further comprises the step of extracting the first and second encoded signals and the time delay period from the composite signal; and  
the decoding step, comprises the step of delaying the extracted second encoded signal by the extracted time delay period, whereby the received first and second encoded signals are realigned in time.
  
3. The method of claim 2 wherein the generating step comprises the step of generating the composite signal comprising a data table containing information related to the first and second encoded signals and the data representing the time delay period.
  
4. The method of claim 3 wherein the data table is a program map.table (PMT).

5. The method of claim 3 wherein the data table is a program and information system protocol-virtual channel table (PSIP-VCT).

6. The method of claim 3 wherein the time delay period representative data comprises the time duration of the time delay period.

5 7. The method of claim 6 wherein the time delay period representative data comprises a number representing a number of time intervals of predetermined length.

8. The method of claim 1 wherein:

10 the step of encoding the first content representative signal comprises the step of using an encoding technique backward compatible; and

the step of encoding the second content representative signal comprises the step of using an encoding technique relatively robust with respect to the encoding technique used in the first content representative signal encoding step.

9. The method of claim 8 wherein:

15 the step of encoding the first content representative signal comprises the step of channel encoding the content representative signal using 8-VSB modulation; and  
the step of encoding the second content representative signal comprises the step of channel encoding the content representative signal using one of 4-VSB or 2-VSB modulation.

20 10. The method of claim 9 wherein the content representative signal is a video signal, and:

the step of encoding the first content representative signal further comprises the steps of source encoding the content representative signal using MPEG 2 video compression encoding and system encoding the source encoded content representative signal using MPEG 2 packet format; and

25 the step of encoding the second content representative signal further comprises the steps of source encoding the content representative signal using JVT

video compression encoding and system encoding the source encoded content representative signal using MPEG 2 packet format.

11. A staggercasting receiver, for receiving a composite signal comprising an encoded first signal representing content, which content has a time duration, and  
5 an encoded second signal representing the content wherein the first encoded signal is delayed with respect to the second encoded signal by a specified time delay period for the time duration of the content, comprising:

a demultiplexer, responsive to the composite signal, for extracting the first and second encoded signals;

10 a selector, responsive to the extracted first and second encoded signals; and  
a delay device, coupled between the demultiplexer and the selector, for delaying the extracted second encoded signal by the specified time delay period for the time duration of the content, whereby the extracted first and second encoded signals are realigned in time.

15 12. The receiver of claim 11 wherein:

the composite signal further comprises a signal carrying data representing the specified time delay period;

the demultiplexer further extracts time delay period signal; and

the delay device is responsive to the extracted time delay period signal to

20 introduce the extracted time delay period to the extracted second encoded signal.

13. The receiver of claim 12 wherein the time delay period representative signal comprises a signal representing a data table, including data related to the first and second encoded signals and the time delay period representative signal.

14. The receiver of claim 13 wherein the data table is a program map table  
25 (PMT).

15. The receiver of claim 14 wherein the data table is a program and information systems protocol-virtual channel table (PSIP-VCT).

16. The receiver of claim 11 wherein the first encoded signal is encoded using a backwards compatible encoding technique and the second encoded signal is encoded using an encoding technique relatively robust with respect to the first encoding technique.

5        17. The receiver of claim 16, wherein the first encoded signal is channel encoded using 8-VSB modulation and the second encoded signal is channel encoded using one of 4-VSB or 2-VSB modulation, further comprising:

10      a channel decoder, responsive to the composite signal, for channel decoding the first encoded signal using 8-VSB demodulation and decoding the second encoded signal using one of 4-VSB or 2-VSB demodulation.

15      18. The receiver of claim 17, wherein the content representative signal is a video signal, the first encoded signal is source encoded using MPEG 2 video compression encoding and system encoded using MPEG 2 packet format, and the second encoded signal is source encoded using JVT video compression encoding and system encoded using MPEG 2 packet format; and further comprising:

20      a decoder, coupled to the channel decoder, for system decoding the first encoded signal using MPEG 2 packet format, source decoding the first encoded signal using MPEG 2 source decoding, system decoding the second encoded signal using MPEG 2 packet format, and source decoding the second encoded signal using JVT source decoding.

19. The receiver according to claim 11, wherein the encoded first and second signals are channel encoded, and wherein

one of the channel coded first and second signals exhibits more robust channel coding than the other of said first and second signals.